

REMARKS

In response to the Office Action mailed June 14, 2007, Applicants are filing this response. Applicants would like to thank the Examiner for the courtesies extended to the Applicants' representative during an interview held on October 11, 2007.

Election/Restriction

Applicants elect to prosecute Group 1 including Claims 1-15. Applicants have canceled Claim 16, directed to the non-elected invention.

Claim Rejections 35 USC §112

In the Office Action, the Examiner rejected Claim 1 as being incomplete for omitting essential elements. Applicants respectfully traverse and respectfully submit that a person skilled in the art knows how to connect a nozzle assembly to a riser. Applicants respectfully request that the Examiner withdraw the rejection.

In the Office Action, the Examiner rejected Claims 2, 9, and 14 for including a broad range and a narrow range. In response, Applicants have amended the claims to remove the narrow range. Applicants respectfully request that the Examiner withdraw the rejection.

Claim Rejections 35 USC §102

In the Office Action, the Examiner rejected Claims 1-7 and 9-14 as being anticipated by Nielsen (U.S. Patent No. 4,778,658) ("Nielsen") under 35 USC §102(b). To the extent the rejection applies to the amended claims, Applicants respectfully traverse the rejection.

Claim 1 recites a mixing zone at the discharge end of at least one feed nozzle such that the mixture (of hydrocarbon feed and atomization gas) is fed into the catalyst. (Emphasis added).

Nielsen teaches atomization chamber 102 for mixing gas oil and steam. Catalyst flows through conduit 38, into chamber 98 through opening 115, and into mouth 70. Partition 120 separates chamber 102 from mouth 70. The size of chamber 102 and

partition 120 keep a gas oil and steam mixture from being fed into the catalyst. (See Fig. 2).

Nielsen does not teach or suggest the desirability of a mixing zone at the discharge end of at least one feed nozzle such that the mixture (of hydrocarbon feed and atomization gas) is fed into the catalyst as recited in Claim 1.

Applicants respectfully request that the Examiner withdraw the rejection to Claim 1, and dependent claims 2-7 and 9-14 for at least the reasons stated above.

Claim Rejections 35 USC §103

In the Office Action, the Examiner rejected Claim 8 as being unpatentable over Nielsen under 35 USC §103(a). To the extent the rejection applies to the amended claims, Applicants respectfully traverse the rejection.

As discussed above, Applicants respectfully submit that Nielsen does not teach or suggest the desirability of a mixing zone at the discharge end of at least one feed nozzle such that the mixture (of hydrocarbon feed and atomization gas) is fed into the catalyst as recited in Claim 8.

Applicants respectfully request that the Examiner withdraw the rejection to Claim 8 for at least the reasons stated above.

Allowable Subject Matter

Applicant would like to thank the Examiner for stating that claim 15 contains allowable subject matter.

Conclusion

Applicants respectfully submit that every objection and rejection to the claims has been overcome and that the claims are in a position for allowance. If the Examiner believes it would be useful to discuss the above contents with Applicant's representative, the Examiner is invited to phone the undersigned.

Respectfully submitted,
Ye-Mon Chen et al

A handwritten signature in black ink, appearing to read 'William E. Hickman', is written over a horizontal line.

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